

REMARKS

In the Final Office Action, the Examiner rejected claims 11-15, 35-37, and 53-55. By the present Response, Applicants amended claims 11-12, 35, and 53 and added new claims 64-84. No new matter was added. Upon entry of these amendments, claims 11-15, 35-37, 53-55, and 64-84 will be pending in the present patent application. Reconsideration and allowance of all pending claims are respectfully requested.

Claim Rejections under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 53-55 under U.S.C. § 112, First Paragraph, for as failing to comply with the written description requirement. The Examiner stated that claims 53-55, as amended, recite a “computer program [provided] on a computer-readable medium,” but that the specification does not provide adequate written description to support such an amendment. Final Office Action, page 3. The Examiner asserted that there is no recitation or illustration in the originally filed disclosure that would support the claimed “computer program [provided] on a computer readable medium” as recited in claims 53-55. *Id.* Applicants respectfully traverse this rejection.

Legal Precedent

Regarding the written description requirement, the initial burden of proof regarding the insufficiency of the written description falls on the Examiner. Accordingly, the Examiner must present evidence or reasons why persons skilled in the art would not recognize a description of the claimed subject matter in the applicant’s disclosure. *In re Wertheim*, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). As the Federal Circuit has explained, the fundamental factual inquiry with regard to the written description requirement is whether the specification conveys with reasonable clarity to those of ordinary skill in the art that, as of the filing date sought, applicant was in possession of the claimed invention. *See, e.g., Vas-Cath, Inc. v. Mahurkar*, 19

U.S.P.Q.2d 1111, 1117 (Fed. Cir. 1991). The Examiner is also reminded that the written description requirement does not require the claims to recite the same terminology used in the disclosure. The patentee may be his own lexicographer. *Ellipse Corp. v. Ford Motor Co.*, 171 U.S.P.Q. 513 (7th Cir. 1971), *aff'd* 613 F.2d 775 (7th Cir. 1979), *cert. denied*, 446 U.S. 939 (1980). Moreover, any information contained in any part of the application as filed, including the specification, claims and drawings, may be added to other portions of the application without introducing new matter. Accordingly, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 226 U.S.P.Q. 683 (Fed. Cir. 1985).

Deficiencies of Rejection

In the Office Action, the Examiner specifically stated:

-- The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 53-55, as amended recite a "computer program [provided] on a computer-readable medium". However, the specification does not provide adequate written description to support such an amendment. Examiner is unable to find any recitation or illustration in the originally filed disclosure that would support the claimed "computer program [provided] on a computer readable medium" as recited in claims 53-55. The Applicants respectfully traverse this rejection. --

Final Office Action, page 3.

Applicants respectfully stress that the present application supports a computer program provided on a computer readable medium. First, as explained in the specification, the present techniques may be conducted is by a computer algorithm. Application, page 17,

lines 14-16. Furthermore, the application refers to Fig. 6 in teaching that one example of a template 108 may be an algorithm. More specifically, “[a] template 108 algorithm, for example, may digitally copy pixilated image data in the selected region or regions of the digitized sheet corresponding to the selected images.” *Id.*, at page 17, lines 30-31; page 18, line 1. The computer algorithms described in the present application provide support for the computer program recited in claims 53-55.

Furthermore, the present applicant also provides support for the computer program to be provided on a computer readable medium. As discussed with reference to Fig. 4, an image data management system 62 may comprise internal clients 74, where image data may be accessed and/or viewed, or reconstructed and/or output, in accordance with the present techniques. *Id.*, at page 13, lines 23-24; page 14, lines 20-27. Furthermore, “[a]n archive 82 system may be designed to receive and process image data, and to make the image data available for review.” *Id.*, at page 15, lines 19-20. Thus, the archive 82 may be used in the image data management system 62 to store image data, or algorithms or programs to process the image data. A user may interact with the archive 82 via the clients 74.

Applicants respectfully assert that the archive is one example of a computer readable medium which may provide computer programs, or computer algorithms, comprising routines to execute the recited routines of claims 53-55. Undeniably, in view of the foregoing, the skilled artisan would recognize that Applicants had possession of the recited invention of the present claims 53-55 at the time of the filing of the original application.

Nevertheless, in an effort to advance prosecution, Applicants have amended the written description to incorporate the subject matter of original claim 53 to further support claim 53. For these reasons, the Applicants respectfully requests withdrawal of the rejections under Section 112, First Paragraph.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 11-15, 35 and 53 under 35 U.S.C. § 103(a) as unpatentable over Wang et al. (U.S. Patent No. 6,212,291, hereinafter “Wang”) and to Nishihara (U.S. Patent No. 4,847,694, hereinafter “Nishihara”). The Examiner rejected dependent claims 36, 37, 54, and 55 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Wang and Nishihara as applied to claims 35 and 53 above, and further in view of Avila et al. (U.S. Patent No. 6,947,584, hereinafter “Avila”). Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must show that the combination includes *all* of the claimed elements, *and* also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Further, the Supreme Court has recently stated that the obviousness analysis should be explicit. *See KSR Int'l Co. v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385 (U.S. 2007) (“[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) (quoting *In re Kahn*, 441 F.3d 977,988 (Fed. Cir. 2006)).

Deficiencies of the Cited Combination

Each of the independent claims 11, 35, and 53, as amended, generally recite a method, a system, or a computer program for digitally slicing and collating digitized images on a digitized sheet of film. In each of the independent claims, the digitized sheet of film is generally recited to have digitized images arranged in a regular grid or array, and having substantially similar dimensions. As amended, the configuration of the digitized sheet of film is more clearly defined in each of the independent claims 11, 35, and 53. Independent claim 11 recites, *inter alia*, “a digitized sheet of film having a number of images ... wherein the images are arranged in a regular grid on the analog sheet of film.” (Emphasis added). Independent claim 35 recites, *inter alia*, “a digitized sheet of film having a number of digitized images, the sheet of film resulting from scanning of an analog sheet of film ... the analog sheet of film having a number of image frames having substantially the same dimensions and corresponding to the number of digitized images.” (Emphasis added). Claim 35 further recites, *inter alia*, that the digital template is configured “based on the number and dimensions of the image frames to partition the image frames.” (Emphasis added). Independent claim 53 recites, *inter alia*, “a digitized sheet of film having a number of images, the sheet of film resulting from scanning of an analog sheet of film...wherein the images are discretely acquired and arranged in a regular array on the analog sheet of film.” (Emphasis added). In all three of the independent claims 11, 35, and 53, a sheet of digitized film has a regular grid of images, or image frames having substantially the same dimensions, or a regular array of images. See, e.g., Application, page 6, lines 4-6; page 18, lines 5-16.

Conversely, Wang (the primary reference) does not teach or suggest that images may be sliced or separated according to any dimensions of the digitized images or configuration of the digitized images on a digitized sheet of film. Wang discloses a method for detecting an area of a subimage, or some desired region of

interest or portion of an image, from a digital film. Wang teaches that in taking an image of a body part, a region of interest may be enhanced on the digital film by applying collimation blades around the region of interest during the acquisition of the image. Wang, at col. 4, lines 20-49. The purpose of Wang is to find the region of interest in a digital film. The region of interest may also be a subimage, which “contains a single irradiation field and can not be further partitioned...” *Id.*, at col. 4, lines 55-57. Wang teaches that “it is desirable to exclude the regions shadowed by the collimation from the calculation,” but “the boundaries between the region of interest (radiation field) and the shadow regions (collimation) are usually fuzzy due to the radiation scattering” (emphasis added) *Id.*, at col. 2, lines 9-10; col. 2, lines 26-28. Distinguishing these “fuzzy” boundaries involve an image partitioning process to determine unknown image boundaries and obtain an end result of simple sub-images. *Id.*, at col. 4, lines 62-63. More specifically, the separation of subimages from the sheet of film cannot be accomplished until the boundaries of the subimages are determined. As the boundaries of the subimages are not known, Wang teaches a process to estimate the boundaries.

The image partitioning process of Wang to determine unknown image boundaries is not at all comparable to the digital templates of the present techniques. Unlike the present techniques, Wang is required to rely on the content of images. In contrast, the present techniques may slice and collate digitized images from a digitized sheet of film based on a known configuration (e.g., regular grid or regular array), known dimensions, or a known number of the images on the sheet of film. As disclosed in the present application, individual images may be separated by digital templates, which in embodiments may be applied to automatically separate digitized images from one another. Application, page 17, lines 25-27. Furthermore, as also generally recited in all the independent claims 11, 35, and 53, the number of analog images scanned to produce a digitized sheet of film generally corresponds to the

number of digitized images on the digitized sheet of film. *See id.*, Fig. 5; page 17, lines 21-31; page 18, lines 1-3.

To be sure, the image partitioning process taught in Wang could not be and is not based on the number or dimensions of images in a sheet of film, or based on a known configuration of images on the sheet of film, for example, because the partitioning process of Wang is accomplished by “pixel-level detection,” “line-level delineation of candidate collimation blades,” and “estimation of the most likely partitioning.” Wang, col. 4, lines 26-30. Slicing or separating the digital films cannot be accomplished based on dimensions or known information, and can only be accomplished once “fuzzy” boundaries are detected. No template is available for slicing or separating the digital films in Wang, as each digital film may contain a complicated number of “simple sub-images,” or “compound sub-images,” whose borders depend not on simply the number or size of the digital images in the digitized sheet of film, but rather, for example, on the position of the collimation blades placed during an acquisition of the images and the fuzziness of the resulting images.

Nishihara (the secondary reference) does not obviate the deficiencies of Wang with regard to the independent claims. Indeed, Nishihara is absolutely devoid of the features discussed above. Therefore, independent claims 11, 35, and 53 and their dependent claims are patentable over Wang, and Nishihara, whether taken alone or in combination. Further, the Avila reference relied upon by the Examiner in the rejection of dependent claims 36, 37, 54, and 55 does not obviate the deficiencies of Wang and Nishihara. Accordingly, Applicants respectfully request the Examiner withdraw all foregoing rejections under § 103 and allow all pending claims.

New Claims

By this Request for Continued Examination, Applicants submit new claims 64-84. None of the new claims add new material to the present application. The new claims are generally directed to features of the digitized sheet of film, the digitized images, and the digital template. Support for the new claims can be found in the specification, for example, at page 17, lines 5-31; page 18, lines 1-16, and lines 29-31; page 19, lines 15-32. All new claims are believed to be patentable over the art cited by the Examiner. Applicants respectfully request allowance of all new claims 64-84.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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